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the case of Oslo

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Waving goodbye to sprawl: the case of Oslo

Petter Næss, Teresa Næss and Arvid Strand

Abstract

Sustainable mobility has been an important concern in urban planning and development in Oslo since the 1990s. The period has been characterized by concentrated and compact urban development. This has contributed to reduce growth in car traffic. Analyses of selected land use and transport plans and policy documents, professional journal articles and interviews with key actors show that there has been a high degree of consensus about this spatial development strategy. Considerable investments have been made in public transport as well as road development; the former based on broad consensus. Road capacity increases have been contested among professionals but widely supported by politicians.

Introduction

For nearly a quarter of a century sustainable development has been on the international agenda. Among many other things we need to limit energy consumption, and in Oslo, the capital of Norway, planners and decision-makers have tried to implement policies to provide a more sustainable mobility. This has included means such as densification and improved public transport.

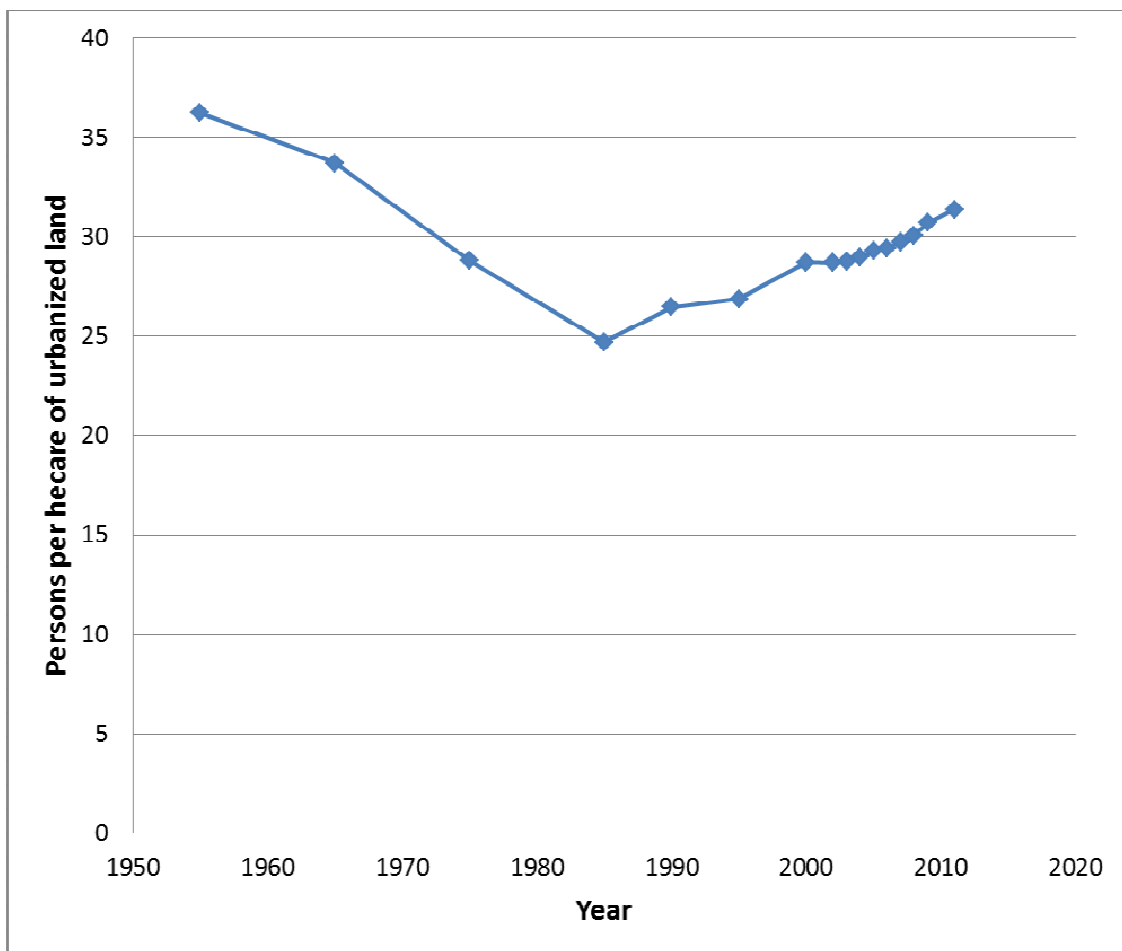
Economic growth has in many European cities been accompanied with reduced population density during the 1980s (Newman and Kenworthy, 1999), and decentralization of workplaces and residences is by many considered an almost inevitable tendency in Europe. The European Environmental Agency (2006, p. 5) states that urban sprawl is a common phenomenon throughout Europe, and Schwedler has found that in the East European countries urban sprawl takes place 'at a pace which leaves anything experienced in the west far behind' (Schwedler, 1999). In the pursuit of a more sustainable mobility this is very problematic (Newman and Kenworthy, *ibid.*; Næss et al., 1996; Næss, 2006 a, 2012; Zengras, 2009). However, some countries are now experiencing a trend of reurbanization. In Norway the ten largest cities had an average population density increase of 6 % during the years 2000 to 2011 (Statistics Norway, 2011a, b). In Oslo, the number of inhabitants in the continuous urban area increased from 755,000 to 907,000 (i.e. by 20 %) between 1998 and 2011, with an increase in urbanized land of only 7 %. Renewal of housing areas and transformation of derelict and underutilized industrial and harbor areas contributed to this.

The case study on which this paper is based has investigated plans and policy documents (eight altogether), previous research studies, articles in a professional journal (more than 100), different groups of actors (11 interviews) and geographic as well as social and cultural conditions (Næss, Næss and Strand, 2009). An interdisciplinary approach was chosen including theories of spatial development and transformation of cities, theories of path dependency, theories of political economy, discourse theories as well as normative theories on sustainable urban development and mobility. This paper is an abbreviated and slightly elaborated version of a longer article recently published in *European Planning Studies* (Næss, Næss & Strand, 2011).

Oslo's spatial development

A long-lasting period of spatial expansion in Norwegian cities came to a halt in the 1990s, particularly in the largest urban regions. In Oslo, urban sprawl stagnated even earlier. As can be seen in Figure 1, the population density within the continuous urban area increased by as much as 27 % over the period 1985-2011.

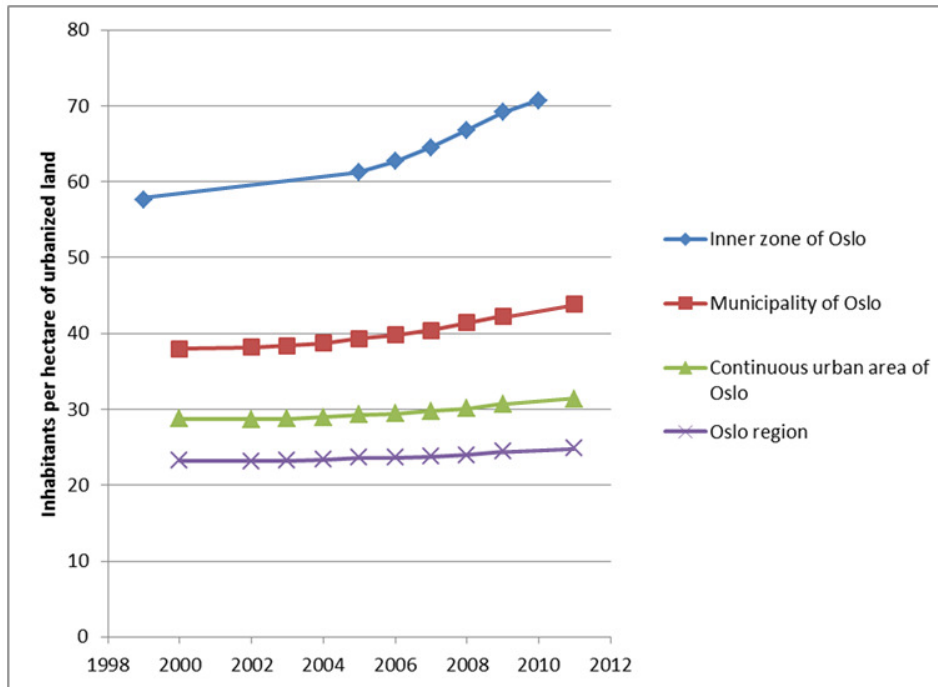
Figure 1: Changes in population density within the continuous urban area of Oslo during the period from 1955 to 2011. Sources: Engebretsen, 1993; Statistics Norway, 2011a and b; Riksrevisjonen, 2007.



During recent decades, the population density increase has been formidable in the central parts of Oslo. Within the so-called Inner Zone the number of inhabitants grew by 39% from 1989 to 2011, with no increase in the urbanized land (Municipality of Oslo, 2010). There has also been an overall population density increase for all urban settlements of the somewhat greater 'Oslo Metropolitan Area', although the peripheral settlements have combined densification with some development on previously undeveloped land. In spite of the latter, the number of inhabitants per hectare of urbanized land within the region as a whole grew by 7.5 % over the years 2000-2011.

Figure 2 shows the development in population density since 1999/2000 in different parts of the Oslo region.

Figure 2: Changes in population density within the inner zone of Oslo, the municipality of Oslo, the continuous urban area and within the entire Oslo region since 1999/2000. Sources: Statistics Norway, 2011a and Municipality of Oslo, 2010.



Although there has been considerable urban highway development and an increase in road and parking capacity, the urban development in Oslo has thus contributed to reduce growth in car traffic. As large investments have also been made in public transport, Oslo is now developing in a notably less car-dependent direction at a time where other cities and countries are heading in the opposite direction.

What has been happening in Oslo? Different mechanisms are at work. In the first place the potential for densification was big from the beginning, as densities were from the start not very high. Rocky terrain and the fact that the municipality of Oslo is situated in a 'bowl' surrounded by hills also counteracted spatial expansion of the city, which would require costly terrain leveling works. Industries have moved abroad and left large areas vacant for urban transformation. Strong economic growth, high in-migration to the city and strong protection of surrounding areas against urban expansion has facilitated a high pace of development and hence a rapid increase in urban population density. The densification has required renewed investments in technical and social infrastructure in the inner city, thus making inner-city living and job locations more attractive, leading to a higher population base facilitating further infrastructure improvements. In other words a self-amplifying process. Other important conditions for the densification in Oslo are cultural, economic and political, along with the prevailing ideas among planners and policy makers.

Sustainable development

The dominating interpretation of the concept of sustainability has in some countries been redefined in such a way that the social dimension is interpreted as concern not to offend powerful interest groups, the economic dimension as promoting traditional economic growth, and the environmental dimension as providing a clean and esthetically attractive local environment, with little concern for global-scale impacts of local consumption levels and emissions, illustrating a situation where the hegemonic discourse somehow 'eats up' the new alternative discourse (KoshraviNik, 2006). This does, however, not seem to have taken place to any high degree in the Norwegian planning discourse. In Norway, political focus on sustainable development has been strong since the late 1980s, boosted by the fact that the UN Commission putting the concept on the international political agenda (World Commission on Environment and Development, 1987) was headed by Gro Harlem Brundtland, who was Norwegian Prime Minister 1986-1989 and 1990-1996.

The concept of sustainable development is to a high extent addressed and discussed in all the investigated plans and policy documents of the case study, investigated articles and among the interviewees. Oslo's 'transport packages' however hardly touch upon the subject, while professional journal articles discuss sustainability mainly as an environmental challenge. Some documents and interviewees include social and economic aspects. The social aspects are usually about social integration and cohesion, and the economic about efficient resource use. Distinct from the debates in some other countries (e.g. Denmark), local economic competitiveness is not claimed to be part of the concept of sustainable development as far as we can observe.

Sustainable development has gained a status as an overarching goal among land use planners and in land use plans in Oslo, but has not achieved the same status in transport planning. In the transport plans, the concept is hardly referred to. Environmental problems resulting from growing car traffic is however the sustainability challenge most commonly mentioned in our investigated plans and policy document, articles and among our interviewees. Saving nature and urban green structure comes next, whereas there is less emphasis on road capacity increases, energy in buildings, waste, 'closed loops', city attractiveness and social cohesion. Continual growth in the building stock is taken for granted and hardly problematized at all.

The compact city

There is a strong support of the compact city as a model for urban development. For a long period, strong outdoor recreation interests have managed to keep the border between the very popular forest areas surrounding the city (*Marka*) and the built environment almost unchanged. Densification and development close to public transport nodes are the main land use measures, whereas improving public transport is the dominant transport policy measure. Some sources also emphasize securing urban green areas, improving conditions for biking, and restrictions on auto use. According to the latest municipal plan for Oslo, the population is forecasted to increase from 560.000 to 675.000 between 2008 and 2020 alongside a spatial expansion of only 5 km², which means that the urban population density will increase from 40 to 48 persons per hectare. The transport packages are consistent with urban densification but do not focus on spatial strategies. The strong support of compact city development is in line with the findings of Hoftun (2002), who states that the professional and political discourse on urban sustainability in Norway has evolved around the issue of limiting urban sprawl and that strong discourse coalitions supporting this have been formed.

These sustainability-based arguments are supported by cultural trends and lifestyles. There is a long-standing and strong outdoor recreation culture in Norway emphasizing cross-country skiing

and walking. In addition, there has been an increasing interest among the population for ‘urban culture’ and ‘café life’ (Hellevik, 1996; Sjaastad et al., 2007).

In Oslo Metropolitan Area (and to a high extent in Norwegian larger cities in general), the discourses supporting compact city development have converged into a doctrine for urban development (Faludi and van der Valk, 1994). A doctrine comes close to what is often termed as a “hegemonic discourse” within a field of society (Hajer, 1995). In the Oslo region, an urban containment doctrine has prevailed for a long time before the transportation impacts of outward urban expansion entered the Norwegian planning agenda. Today, there is also a widespread understanding among participants of the Norwegian land use planning discourse that densification rather than sprawl is preferable in order to reduce car travel.

Transport policy

In opposition to the widespread support of the compact city model the transport policy in Oslo seems to be somewhat ambiguous. There has been strong consensus about the need for public transport improvements in Oslo, and all the Oslo interviewees support increased public transport investments. In the plans and policy documents, public transport improvements are, however, combined with road building. Road capacity increases are contested among professionals but widely supported by politicians. None of the sources deny the existence of a traffic-generating effect of road capacity increases in congested areas, but it is often downplayed or ignored. The arguments for public transport improvements as a measure to enhance sustainable mobility implicitly assume that better public transport reduces the growth in car traffic. This assumption is, however, rarely discussed explicitly.

Stakeholders

Developers and other market agents have during the recent decades been increasingly interested in urban densification. However, the interviews show several examples of how land owners and investors sometimes put pressure on politicians in order to have plans adopted that will allow forms of land use that are less than optimal seen from a sustainability perspective and sometimes result in sprawl.

The municipality of Oslo generally promotes a dense and concentrated urban development, while local authorities in suburban and outer-region municipalities often aim for a higher proportion of the total regional development in outer parts of the metropolitan area than what would be preferable from the perspective of reducing car travel. They are also prone to yield to pressure from companies wanting to locate at a longer distance from public transport nodes than presupposed in the regional plans. Such competition for inward investment in regions where the functional city is divided between many municipalities is a well-known phenomenon described in urban theory and political economy literature (e.g. Logan and Molotch, 1996). Arguably, economic globalization and increasing influence from neoliberal ideas have in the recent decades led to a stronger emphasis among municipal politicians and bureaucrats on competitiveness. In spite of widespread goals of reducing car travel, the municipalities have usually also lobbied toward national transport authorities for the realization of local road projects. A fragmented organizational structure and a funding system encouraging local mobilization for state infrastructure funding has induced the municipalities to place less emphasis on goals of increasing the market shares of public and non-motorized transport modes.

Whereas there is some disagreement between different parties on transport policy issues (with the left being more negative and the right, especially the right-wing liberalist Progress Party, more

positive to road development), there is a much higher degree of consensus about the compact city strategy. Yet, here too, the Progress Party argues for a relaxation, among others in the form of development in some of the areas now protected by the Marka border.

Different sectors within public administration have generally supported the aim of avoiding sprawl but have been more split on transport policy issues. The Ministry of the Environment and its county-level agencies have strongly promoted compact urban development and advocated public transport improvement. The transport authorities have promoted a higher mobility in general, thus supporting investments in public transport as well as highways. The Ministry of Transport is generally positive to concentrated urban development, because this may reduce the need for investments in infrastructure provision. Notably, the regional agencies of the Highway administration have protested against municipal plans for residential and workplace development at car-dependent locations. On the other hand, the Ministry of Transport and the Highway administration have facilitated road building leading to 'region enlargement' (Engebretsen, 2008) involving longer commuting distances as well as facilitating a more decentralized pattern of development (Strand et al., 2009).

These differences between the two ministries may in part reflect different organizational cultures (Strand and Moen, 2000). In the Ministry of the Environment, the staff of the planning department consists to a high extent of planners, geographers, political scientists, law scientists etc, whereas in the Ministry of Transport economists have a much more prominent position. The latter tend to favor economic methods for project evaluation, and the recommendations based on such analyses may sometimes deviate from those based on adopted political goals. In general, cost-benefit analyses of transportation investment projects tend to give priority to projects that can in a short term reduce travel times, rather than projects contributing to other social goals (Næss, 2006b).

Environmental organizations have partly endorsed the urban containment policy, but we did not find any strong opposition from the NGOs against car-dependent development projects like out-of-town shopping facilities. There has also been a long-standing trend among environmentalists to oppose densification because it often leads to loss of intra-urban green areas and sometimes makes up a threat to local environmental qualities (view, outdoor areas, etc.). We do, however, not find any strong support among environmental organizations in Oslo Metropolitan Area of anti-urban or 'permaculture' models of sustainable settlements.

Conditions for implementation

Oslo's compact urban development has been in accordance with a similar prioritization in the municipal plans over a long period. According to the Norwegian planning legislation, it is forbidden to establish buildings and technical infrastructure (except for agricultural purposes) in areas set aside for non-development in the municipal master land use plan. By avoiding to set aside excessively large areas for development and keeping the developmental areas concentrated, the municipalities of Oslo Metropolitan Area (in particular the Municipality of Oslo) have used the planning legislation actively to prevent urban sprawl. National Policy Provisions for Coordinated Land Use and Transport Planning and a ministerial directive requiring affected municipalities to incorporate the Marka border in their master land use plans have both been important instruments for implementing national goals in the plans of the municipalities of the Oslo region. The possibility for county authorities to object to municipal plans violating these national provisions has also been important.

Within the zone set aside for development, the master plans have been more flexible, leaving considerable room for negotiation between the municipal authorities and developers about the

content and design of development on specific sites. An important case in point is, however, that the limited possibilities for urban expansion ensured through the master plans have increased the motivation of developers for embarking on brownfield transformation project.

Barriers to sustainable urban development

While the availability of legal instruments for land use control hardly makes up any barrier to sustainable urban development, the plans, articles and interviews point to other barriers that may prevent the realization of sustainability goals in urban development. Lack of coordination, especially across sectors and municipal borders, is the most often mentioned barrier to sustainable urban development at a metropolitan scale and there is a widespread opinion that the coordination between municipalities as well as between the land use and transport authorities is insufficient. Better coordination between central and local authorities is also called for by some. Recent planning documents and some interviewees actually propose a new regional decision-making body.

Since lack of coordination is such a widely perceived problem, why are not the necessary coordinating mechanisms established? Arguably, lack of coordination often exists because some actors do not want to take the interests of other entities into consideration. The explanations of lack of coordination must then be sought in power relations, e.g. between ministries. General neoliberal ideas of competition as conducive to efficiency, productivity and economic growth are probably also part of the explanation. In Norway as well as in a number of other countries, downscaling urban governance into lower layers of administrative hierarchy has been pursued as part of liberal reforms of the planning system (Møller, 2003; Næss, 2008).

Some sources point at lack of political willingness, increasing influence from market forces, fragmented land ownership and contested knowledge claims as additional barriers. Increasing influence of market agents on land use development is widely thought to counteract sustainability. On the other hand, several interviewees and articles hold that market forces have pulled in the direction of densification during the latest decade or two. In most municipal plans and the White Paper, compact city development is seen as conducive to growth, which reflects an ecological modernization perspective on urban sustainability (Mol & Spaargaren, 2000).

Decoupling growth from environmental impacts

In most of our investigated data material, the desirability of growth in the building stock is not questioned. None of the interviewees regard growth in the population and/or the building stock as a problem. Growth of the building stock - in absolute figures as well as in floor area per capita - has generally been taken as an assumed good. Sustainability efforts in urban development have been framed as a matter of obtaining a (partial) *decoupling* (OECD, 2002) between growth in the building stock and negative environmental impacts.

Such a partial decoupling has been obtained in the Oslo region, as a considerable growth in the building stock has resulted in only a moderate conversion of natural areas and farmland into urbanized land. Yet, the densification policy has had its negative environmental impacts. The intra-urban green areas have been reduced as a result of the compact city strategy, in spite of conscious attempts to channel densification toward areas already marked by technical encroachments. Although urban districts developed according to modernist planning ideals often include large lawns of low biological value as well as recreational utility, some of the lost urban green areas are in the inner parts of Oslo, where greenery is by no means in excess.

Moreover, some of the urban transformation sites that have made it possible to construct new buildings without making encroachments on natural areas or farmland have been made available

as a result of sharp decline in industrial and harbor activities in Oslo due to global and regional relocation processes. Oslo's partial decoupling between growth in the building stock and negative environmental consequences has therefore to some extent been conditioned on prior relocation involving encroachments on nature elsewhere.

Although a wish to limit the amount of travel has been part of the motivation of the compact urban development, growth in transport and mobility has largely been taken as an unavoidable fact, at least for the region as a whole. Sustainability policies have primarily aimed at channeling as much as possible of this growth to public transport. The fee of Oslo's road tolls has hitherto been quite modest, but the latest transport policy deal opens for an increase.

Concluding remarks

Oslo has broken a long-lasting trend of spatial expansion and has since the mid-1980s followed a clear urban containment policy, combining high growth in population and the building stock with low encroachments on natural and cultivated areas and a moderate traffic growth. Within the Norwegian profession of spatial planners, the compact city has obtained hegemonic status as a model for sustainable urban development. There has also been a considerable market demand for more intensive land use within existing urban areas, especially in the central parts of the region. Market agents have sometimes also pushed for greenfield development at car-dependent locations in the outer parts of the region. Although competition for inward investment makes up an incentive for outer-area municipalities to accept such location preferences, the greenbelt policy for protecting the forest areas surrounding Oslo and the National Policy Provisions for Coordinated Land Use and Transport Planning have limited such development. There is nevertheless a widespread opinion among planners and policy-makers that the regional coordination of spatial development in the Oslo region should be improved.

The development of transport infrastructure has been more ambiguous, judged against sustainability goals. Along with important improvements in the public transport system (a new metro ring, new streetcar lines and bus lanes, as well as more frequent departures for streetcar and metro trains) there has also been considerable expansion of the road capacity. Although the share of car travel has grown in some of the surrounding municipalities, a strong opposite trend has been observed within the municipality of Oslo, where public and non-motorized transport increased their share of the number of trips from 53 % to as much as 64 % over the period 2001-2009 (Haagensen, 2011).

Whereas public transport improvement has been backed by broad political consensus, road capacity increases have been contested, particularly by land use planners, environmental organizations and politicians to the left. Transport infrastructure authorities and planners have generally considered road development as a measure to combat congestion; the transport planners have, however, at the same time often argued that better roads must be combined with road pricing in order to avoid traffic increase leading to new congestion. The latest transport policy deal (Oslo Package 3) opens for higher tolls on urban motoring.

The Oslo region has experienced strong economic growth (for a European city) as well as population growth since the 1990s. Within the fields affected by land use and transport planning, this growth has taken place with relatively moderate impacts on nature and the environment. Yet, the decoupling between growth and negative environmental impacts is relative, not absolute. The city is still moving away from important goals of sustainable mobility, albeit at a slower pace than earlier.

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